

chiefly the right, are enlarged in defects of the interventricular septum and patent ductus arteriosus; the left ventricle chiefly in coarctation of the aorta. Acute endocarditis is seen to be relatively common in defects of the interventricular septum at the base and in pulmonary stenosis. Cyanosis was not marked in any case and was often absent in most of the defects of the interauricular septum. A moderate degree of cyanosis was fairly common in defects of the interventricular septum. Marked cyanosis was seen chiefly in transposition of the arterial trunks, pulmonary stenosis with defect in the interventricular septum, and pulmonary and tricuspid atresia. Cyanosis was slight or absent in a patent ductus arteriosus. In six cases defect of the interauricular and in four of the interventricular septum the cyanosis was terminal. A thrill was frequent in pure defects of the interventricular septa at the base and in pulmonary stenosis with closed interventricular septum and patent foramen ovale. A thrill was relatively rare in pulmonary stenosis with defect of the interventricular septum and closed foramen ovale. In the great majority of cardiac defects the murmur present was systolic in rhythm.

Insufflation of Air in the Treatment of Pleural Effusion.—C. ACHARD (*Semaine med.*, 1908, xxviii, 445) notes that this form of treatment has been known for some time, being first advocated by Potain in 1889. The precaution of sterilizing the air Achard does not think necessary; in passing through the tube and flask, using an ordinary vacuum or bicycle pump, the air sterilizes itself sufficiently. It takes the place of the heavy fluid, thus relieving the weight on the diaphragm and heart, and at the same time keeping up a gentle compression of the lung. He has used this method often and finds that it is of great help, seeming to prevent or delay a refilling of the pleural cavity, which is so common in some cases. It also obviates all dangers from the too rapid removal of the fluid which sometimes causes pain, cough, dyspnoea, and albuminous expectoration. The insufflation should be stopped at once when the patient complains of the least discomfort. This method of treatment Achard has found to be of great service, especially in tuberculous, serofibrinous, or hemorrhagic pleurisies, and in cases of recurring hydrothorax; in those in which the fluid is purulent, surgical measures must of course be resorted to at once.

The Influence of the Reduction of Kidney Substance upon Nitrogenous Metabolism.—R. M. PEARCE (*Jour. Exp. Med.*, 1908, x, 632) notes the importance of the influence of a possible internal secretion of the kidney, if such exist, upon general nitrogenous metabolism. Up to the present time there is little experimental or other evidence to support such a theory of an internal secretion. Pearce's experiments have been along these lines, that is, in removing amounts of kidney substance sufficient presumably to disturb the hypothetical internal secretion. His conclusions are that the removal up to three-fourths of the kidney substances causes no change in the general nitrogenous metabolism, as determined by the estimation of total nitrogen, urea, and ammonia elimination in the urine. The removal of large amounts leads to the metabolic condition of starvation; this, however, is apparently the result of the gastro-intestinal disturbance associated with extensive

kidney reduction and not to a disturbance of general nitrogenous metabolism. The determination of the amount of fecal nitrogen indicates that the gastro-intestinal disturbance is not due to diminished absorption and, except in one instance, there was no evidence of its being due to an increased elimination of nitrogenous substances into the intestine. These experiments then do not support the theory that the kidney furnishes an internal secretion having an important influence on general nitrogenous metabolism. At least if such a function exists it is not disturbed by the removal of three-fourths of the kidney substance. The metabolism in excessive kidney reduction is that of inanition dependent on gastro-intestinal disturbances, presumably due to faulty chemical co-relation. In this connection further knowledge concerning the elimination into the intestines of toxic substances is desirable.

A New Reflex between the Eye and the Circulatory and Respiratory Systems.—ASCHNER (*Wien. klin. Woch.*, 1908, xxi, 1529) has described a new reflex, the discovery of which came about in the following manner: Professor Jauragg in his lectures upon stuporous cerebral affections demonstrated a method by which a patient could be partially aroused even when he failed to respond to excessive sensory excitations. His method involved pressure on the eyes as a result of which the patient began to stir and often regained consciousness to the extent that he responded to simple questions. No explanation of this phenomenon was offered. Aschner had an opportunity of testing this in von Eiselberg's clinic upon a patient who remained under the influence of the anesthetic an unusually long time after completion of an operation. Calling, shaking, dashing cold water in the face, tickling the nose, pinching, all failed to elicit any response from the patient. Pressure on the eyes was followed by flushing of the face, deep breathing, slight movements, and finally opening of the eyes. During a repetition of the experiment Aschner felt the patient's radial pulse and was astonished to feel it disappear under his fingers. A slowing of the pulse was first noted and this immediately suggested irritation of the vagus. Two possibilities existed: (1) Vagus irritation from increased intracranial pressure and (2) a nervous reflex. On animals the experiment succeeded after opening the skull so that increased intracranial pressure was eliminated as a cause. After cutting the trigeminal nerve, especially after severing it intracranially, the phenomenon was lost. Cutting of the optic, olfactory, motor oculi, trochlear, abducens, auditory, and facial nerves produced, on the other hand, no loss of the reflex. After section of the vagus in the neck the reflex is occasionally obtainable. Whether in this case excitation of the vasoconstrictor centre with increase of the intracardial pressure occurs remains to be investigated. Effects upon the respiration are more marked in rabbits than in dogs or man. Pressure on the eyes as well as electric stimulation of all three branches of the trigeminus produced changes in the breathing, inspiration becoming spasmodic with inspiratory arrest, and likewise expiration, the latter particularly during deep narcosis. The blood pressure rises during pressure upon the eyes. Pressure upon one eye has less effect than upon both. In the exposed heart the slowing of the rhythm with evident decrease in the size of the contractions is visible and if the pressure on the eyes is increased sufficiently, the heart can be arrested in diastole.

Aschner describes other interesting points brought out in his study. The reflex is more easily obtained in narcosis than in patients who are conscious.

Hypophysis Glycosuria and its Relation to the Diabetes of Acromegaly.—It is now quite generally accepted that in acromegaly there is hyperfunction of the hypophysis, which may be of etiological importance. Since many cases of acromegaly are complicated with diabetes, BORCHARDT (*Ztschr. f. klin. Med.*, 1908, lxvi, 332) considers it possible that the latter may be due to the same cause. To test this hypothesis he has injected extracts of the hypophysis subcutaneously in rabbits. The extract was obtained from the hypophysis of man and the horse. In each animal used, following the injection of a rather large dose of extract, glycosuria occurred. The amount of sugar varied from a trace to 4.2 per cent., the glycosuria being transient and seemingly independent of the size of the dose of extract. In two animals hyperglycemia was demonstrated, the blood showing 0.41 per cent. sugar in one instance. In dogs the results were inconstant. Brain extract produced no glycosuria when injected subcutaneously. In reviewing 176 cases of acromegaly in the literature Borchardt finds diabetes in 35.5 per cent. of cases. The pancreas was normal histologically in most of the cases examined. Borchardt thinks his experiments make it probable, although by no means certain, that the diabetes of acromegaly is to be explained by hypersecretion of the hypophysis cerebri.

The Thymus in Basedow's Disease.—CAPELLE (*Munch. med. Woch.*, 1908, lv, 1826) has interested himself in the question of sudden death as a result of operation in cases of Basedow's disease. Some have ascribed death to the narcosis, others to a certain flooding of the blood with the products of the thyroid gland. But the use of cocaine anesthesia has been followed by death, and, indeed, the simple tying of the arteries has resulted fatally. A study of the literature shows that enlargement of the thymus is found in fatal cases with great frequency. Capelle finds that of 60 cases (autopsy), 79 per cent. showed a hypertrophic thymus. The operative and postoperative fatal cases had in every instance an enlarged thymus. The investigation suggests: (1) That the thymus is not necessarily enlarged in Basedow's disease. (2) That its enlargement is clinically a good indicator of the severity of the case. (3) That the deaths from heart failure after operations are, in reality, thymus deaths. Cases which show a persistent enlarged thymus should not be subjected to operation.

Salt Metabolism in Experimental Nephritis.—SCHIROKAUER (*Ztschr. f. klin. Med.*, 1908, lxvi, 182) has produced nephritis in rabbits by administering uranium nitrate and potassium chromate. Severe kidney lesions were obtained, often accompanied by anasarca. Quantitative analysis of the phosphates, chlorides, and sulphates give the following results: In nephritis with generalized cedema one finds an increased water content of the organs (muscle, liver) as a manifestation of the general retention of water. With this there is also found augmentation of the total salts of the organs which is ascribed essentially to the retention of chlorides. The phosphates are not increased in the muscles, but in the

liver the quantity is variable, being above normal occasionally. The sulphates of the muscles are within the normal limits. In the blood, however, the findings are different, the total ash showing a definite, though slight, diminution. The phosphates of the blood remain normal, while the sulphates in animals poisoned with uranium are abnormally high.

Graphic Studies of the Percussion Note.—MAY and LINDEMANN (*Deut. Arch. f. klin. Med.*, 1908, xciii, 500), in their studies upon the tympanitic and non-tympanitic percussion note, have carried out numerous experiments from which they draw the following conclusions: The tympanitic note is characterized by the uniformity of its vibration form. The tympanitic note of the abdomen arises chiefly from one kind of vibration, the ground tone (*Grundtöne*), which is very closely related physically to the pure tone. Additional vibrations are often found, but only in the form of harmonic overtones. As yet their determination has only revealed the first overtone. The non-tympanitic note, on the contrary, shows as its characteristic feature a complicated form of vibrations with very unequal oscillations.

Observations in Experimental Anemia.—MORAWITZ and PRATT (*Munch. med. Woch.*, 1908, lv, 1817) have found in the course of their investigations some interesting phenomena in experimental anemia of rabbits. In cases of pyrocin anemia they have noted the well-known fact that the animals soon became tolerant to the poison. This they have shown to be due to increased resistance of the red blood cells as manifested toward various hemolytic agents, such as sodium chloride solutions of different strength, alkalies, saponin, chloroform, ether, and hemolytic sera. They have obtained practically the same results with washed corpuscles. Therefore the increased resistance is not a property of the serum. In rabbits made anemic by repeated venesections no increase in the resistance of the erythrocytes is found, but when laked blood is injected intraperitoneally the resistance is increased, showing that the increased resistance is not wholly the result of the pyrocin. Four to six days after discontinuing injections of pyrocin the heightened resistance is lost. From the studies of others with human blood, *i. e.*, the finding of increase in the resistance of the corpuscles in pernicious anemia as the condition of the patient grows worse, they think it possible that some prognostic conclusions might be obtained from the study of resistance in this disease. In rabbits made anemic both by pyrocin and by venesection they find a remarkable oxidation that is not found in the normal blood. They believe the phenomenon is due to the presence of incompletely oxidized products of metabolism in the blood. Experiments have shown that the property exists in the serum, not in the red blood cells.

On Sensation to Pain in the Gastric Mucosa.—SCHMIDT (*Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1908, xix, 278) has made some observations on man which are of considerable interest in connection with the pain associated with hyperchlorhydria. In three patients on whom gastrotomy was performed he introduced solutions of hydrochloric acid into the stomach; 20 to 40 c.c. of 0.5 per cent. and 1 per cent. hydrochloric acid were used. They were given the acid about three hours after a